

REMARKS

Claims 1-21 and 56 are presently pending in this application. Claims 1, 4, 6, 11, 15, 18, and 21 have been amended, but the previously presented claims are not disclaimed or disavowed such that they are expressly reserved for examination in a continuation application.

In the May 2, 2007 Office Action, claims 1-21 and 56 were rejected. More specifically, the status of the application in light of this Office Action is as follows:

(A) Claims 1, 2, 4-12, 14-18, 20, 21, and 56 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,825,470 to Miyai et al. ("Miyai"); and

(B) Claims 2, 13, and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Miyai in view of U.S. Patent No. 5,559,582 to Nishi et al. ("Nishi").

As a preliminary matter, the undersigned representative wishes to thank the Examiner for engaging in a telephone conference on July 10, 2007. During the telephone conference, the discussion pertained to the teachings in Miyai and claims 1, 4, 11, 15, 17, 18, and 21. The discussion also pertained to cited references of a July 13, 2007 Office Action relating to a divisional application (U.S. Patent Application No. 11/432, 153) of the presently pending application. The following remarks summarize and expand upon the points discussed during the July 10 telephone conference. The applicant accordingly requests that this paper constitute the July 10 Interview Summary. If the Examiner notices any deficiencies in this regard, the Examiner is encouraged to contact the undersigned representative.

A. Response to the Section 102(b) Rejection under Miyai

Claims 1, 2, 4-12, 14-18, 20, 21, and 56 were rejected under 35 U.S.C. § 102(b) over Miyai. In rejecting these claims, Miyai is characterized as disclosing a stepper or scanning machine that houses a workpiece support, a cleaning device, and a cleaning fluid supply in fluid communication with the cleaning device. Without conceding to the Examiner's characterization of Miyai, claims 1, 4, 6, 11, 15, 18, and 21 have been amended to clarify that the machines have a cleaning fluid supply containing a "liquid-phase cleaning fluid" that is delivered to a workpiece support in the stepper or scanner.

Claims 1, 4, 11, 15, and 18 are the pending independent claims in this application. Although these claims include different combinations of features, they will be discussed together for the purposes of this response because Miyai fails to disclose or suggest at least one feature common to these independent claims. Each of these claims is directed to a stepper or scanning machine that has, *inter alia*, a workpiece support and a device for cleaning the workpiece support, both of which are contained in a common housing. In all of these independent claims, the cleaning device, in one way or another, delivers or supplies a liquid-phase cleaning fluid to the workpiece support.

Independent claims 1, 4, 11, 15, and 18 are patentable over Miyai under § 102 at least because this reference fails to disclose or suggest a cleaning device that delivers a liquid-phase cleaning fluid to a workpiece support. In contrast to these claims, Miyai discloses a cleaning device that consists of a whetstone 196 (a disc made of a porous material) and a corresponding whetstone driving unit 172. The whetstone driving unit spins the whetstone and engages it with a substrate holder 44 of an exposure apparatus 1000. The whetstone has pores that attract contaminants, removing them from the substrate holder. According to Miyai, this process creates residual contaminants that can float into the air and eventually "re-adhere" to the substrate holder. Miyai, therefore, further discloses that the exposure apparatus can optionally include a drawing device 1300 to evacuate these airborne containments from the apparatus. Miyai goes on to explain that the exposure apparatus can also include a blowing device 1320 for assisting the drawing device by lifting certain re-adhered contaminants from the substrate holder. Accordingly, the whetstone driving unit in Miyai does not use a liquid-phase cleaning fluid, but rather mechanically cleans the substrate holder. Also, the blowing and drawing devices merely clean up after the whetstone, using blown air, not a liquid-phase fluid, to lift and capture contaminants before they can re-adhere to the substrate holder.

Independent claims 1, 4, 11, 15, and 18 are also patentable over Miyai under § 103 because Miyai teaches away from using a liquid-phase cleaning fluid. First, Miyai teaches that the "humidity should be kept constant in the first chamber 12" that houses the optics. If Miyai was modified to use a liquid-phase cleaning fluid, the evaporation of the fluid would increase the humidity in the chamber 12 in contrast to Miyai's desired state. Second, if a liquid-phase

cleaning fluid was used with Miyai's drawing and blowing devices to clean up residual contaminants, the drawing and blowing devices would not extract a liquid from the workpiece holder. As a result, a liquid-phase cleaning fluid would remain on the workpiece holder after the cleaning process, which would require a drying time that would impact throughput. Furthermore, modifying the blower of Miyai to spray a liquid would not achieve the desired effect in Miyai of making contaminants airborne so that they can be subsequently captured. Instead, liquid sprayed in attempt to achieve such an effect would splatter within the chamber and potentially damage electrical or optical components. Therefore, the applicant respectfully submits that independent claims 1, 4, 11, 15, and 18 are further patentable over Miyai under § 103.

The remaining claims subject to this rejection depend from one of claims 1, 4, 11, 15, and 18 and are accordingly patentable for at least the reasons explained above with respect to these independent claims. Therefore, the applicant respectfully requests withdrawal of the rejection of claims 2, 5-10, 12, 14, 16, 17, 20, 21, and 56.

B. Response to the Section 103(a) Rejection under Miyai and Nishi

Claims 2, 13, and 19 were rejected under 35 U.S.C. § 103 over Miyai and Nishi. For the reasons explained above and at least because these claims depend from one of claims 1, 11, 18, and 13, claims 2, 13, and 19 are patentable over the combination of Miyai and Nishi. The applicant respectfully requests withdrawal of the rejection of claim 2, 13, and 19.

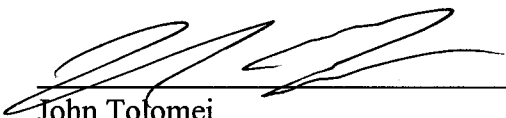
C. Conclusion

In view of the foregoing, the pending claims comply with the requirements of 35 U.S.C. § 112 and are patentable over the cited art. The applicant requests reconsideration of the application and respectfully submits that the application is in condition for allowance. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to contact the undersigned representative at (206) 359-8140.

Respectfully submitted,

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